



Mill Test Certificate

Bri-Steel Manufacturing Inc.
 2125-64 Avenue, Edmonton, AB Canada T6P 1Z4
 Tel: 001 (780) 469-6603
 Fax: 001 (780) 469-6986
 www.brichemsteel.com


Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0182** Product Size: **NPS 18 XS** Production Date: **January 18, 2012**
 Production Method: **Hot Expansion** Product Heat Treatment: **As-rolled**
 Product Standards: **ASTM/ASME A/SA106-2010 Grade B/C, A/SA53-2010 Grade B Type S, NACE MR0175-2009**
 Product Markings: **.BRI-STEEL MFG NPS 18 XS ASTM/ASME A/SA106 GR B/C A/SA53 GR B HEAT BSM-0182 (PIPE # LENGTH MASS) NDE 1370PSI NACE MR0175 2012/01 MADE IN CANADA.**

Product Details				Non-Destructive Testing											
Heat	Test Type	NPS	SCH	Pieces	Length	Mass	Geiger	Res Mag.	Visual	UT	UT	ET	HydroTest	End	
BSM-0182	Heat	18	XS	23	DRL	lb/ft	µR/hr	Gauss	Insp.	OD	WT	ASTM E213	ASTM E309	1370 psi/5s	Condition
						93.45	<5	<20	Pass	Pass	Pass	Pass	Pass	37.5° Bevel	

Chemical Analysis (wt%)																			
Heat	Test Type	Steelmaking Method		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE	CE	
		Blast Furnace: EAF; Ladle	Refining: Vacuum Degass																0.19
BSM-0182	Heat																		

Mechanical Properties											
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rt0.5)	Yield (Rp0.2)	Tensile (Rm)	Y/T	Elongation (A)
					HRBW	Pass					
BSM-0182	Heat	Ferrite & Pearlite	78	Pass	Longitudinal	46,500	45,100	74,500	0.62		42

Additional Details:
 ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with ASTM/ASME A/SA106-2010, A/SA53-2010 and the purchase order requirements, and that the results meet the corresponding requirements.
 ✓ This pipe product meet the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2010 Section 2.1.
 ✓ No weld repairs have been performed on this product. This product has no mercury contamination.
 ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

 2014 Mar 18
 Kenton Dechant, P. Eng.
 Manager of Quality and R&D